

The Claims

1. A leg exercise device having:

a relatively rigid base;

5 at least one first variable volume chamber mounted on or partially defined by the base;

at least one second variable volume chamber mounted on or partially defined by the base;

at least one passageway interconnecting the at least one first chamber with the at least one second chamber,

10 a volume of fluid less than the combined maximum volume of the first and second chambers being located in at least one of the at least one first and second chambers;

15 a first surface sized and located to receive a first part of a user's foot and convey compressive force between the first part and at least one first chamber, and

a second surface sized and located to receive a second part of a user's foot and convey compressive force between the second part and at least one second chamber.

2. The device of claim 1 wherein said first and second parts are on the same foot.

20 3. The device of claim 1 wherein said first and second parts are on different feet.

4. The device of any one of the preceding claims wherein said first surface includes at least part of at least one of the first chambers.

5. The device of any one of the preceding claims wherein said second surface includes at least part of at least one of the second chambers.

6. The device of any one of the preceding claims wherein at least part of one of the first and second chambers is defined by a flexible wall or membrane.
7. The device of claim 6 wherein the flexible wall membrane is formed of an elastic material.
- 5 8. The device of claim 6 wherein the flexible membrane is formed of a substantially inelastic material.
9. The device of any one of the preceding claims further including at least one flexible membrane attached to the base, the base and at least part of the at least one flexible membrane defining at least one first chamber.
- 10 10. The device of claim 9 wherein the at least one flexible membrane defines at least one first chamber and at least one second chamber.
11. The device of claim 9 wherein the base has a recess for each chamber.
12. The device of claim 9 wherein the base has a substantially non-recessed surface on which the flexible membrane is mounted.
- 15 13. The device of claim 9 wherein the flexible membrane is secured to the base with at least one clamp.
14. The device of claim 9 wherein the at least one passageway includes at least one recesses in a surface of the base.
15. The device of any one of the preceding claims wherein the at least one passageway includes at least one external tube communicating one chamber with at least one other chamber.
- 20 16. The device of any one of the preceding claims wherein the base includes first and second portions mounted to each other about a hinge line.
17. The device of claim 16 wherein the first portion includes at least one first chamber.

18. The device of claim 16 or claim 17 wherein the second portion includes at least one second chamber.
19. The device of any one of claims 16 to 18 wherein both portions each include at least one first and at least one second chamber.
- 5 20. The device of any one of the preceding claims including at least one opening to at least one chamber through which fluid may be selectively introduced into or removed from the chamber.
21. The device of any one of the preceding claims wherein the maximum volume of each of the first and second chambers is the same.
- 10 22. The device of any one of the preceding claims wherein the resistance to fluid flow between the first and second chambers is the same in both directions.
23. The device of any one of the preceding claims including at least one first chamber and at least one second chamber for each of the user's two feet and at least one valve operable to selectively link at least one first chamber provided for one foot with at least one first chamber provided for the other foot and to isolate the at least one first chamber from the at least one second chamber.
- 15 24. The device of claim 23 wherein the at least one valve is operable to selectively link at least one second chamber provided for one foot with at least one second chamber provided for the other foot.
- 20 25. The device of any one of the preceding claims having one first chamber and one second chamber for each foot.
26. The device of any one of the preceding claims only having at least one first chamber for one foot and only at least one second chamber for the other foot.
27. The device of any one of the preceding claims including at least one mounting 25 for attachment of the device to another object.

28. The device of any one of the preceding claims wherein the base comprises a footrest for one or two of a user's feet.
29. The device of any one of the preceding claims wherein the fluid is a gas.
30. The device of any one of the preceding claims wherein the fluid is air.
- 5 31. The device of any one of the preceding claims wherein the fluid is a liquid.
32. An article of furniture including the device of any one of the preceding claims.